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Chien-Chi Lo

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Education

2005 ~ 2007	**National Yang-Ming University (NYMU);** Taipei, Taiwan
	M.S. in **Bioinformatics**, Concentration: Genome comparison and analysis. GPA: 4.0
	<u>Thesis title:</u> Identification of small RNAs and their regulatory roles in *Escherichia coli*
1997 ~ 2002	**National Taiwan University (NTU)**; Taipei, Taiwan
	B.S. in **Public Health**, Concentration: Epidemiology. GPA-Overall: 3.67
	Double major in **Medical Technology**

Work Experience

2007~ present   **Theoretical Biology & Biophysics (T-10), Los Alamos National Laboratory, D.O.E., U.S.**

Graduate Research Assistant   <u>Mentor:</u> Carla Kuiken

- To develop Hidden Markov Models for the alignment of the HIV variant viruses HIV-2 and SIV
- Web-interface development

2004 ~ 2005   **Department of Clinical Laboratory Sciences and Medical Biotechnology, NTU, Taiwan**

Full-time Research Assistant

- Involved in a National Science Council program (NSC93-2751-B-002-002-Y): "SARS Coronavirus identification—subculture, growth conditions and neutralization analysis in P3 laboratory"
- Took bench work training - Cell culture/PCR/Nucleotide acids extraction/Sequencing etc
- Conducted the experiments of the HIV -1 virus sub-typing and computer analysis

2002 ~ 2004   **Taitung Branch of the Hualien Armed Forces General Hospital, Taiwan**

Medical technologist/ the Second Lieutenant of Army

- Routine medical lab
- Management of medical lab reagent
- Medical Lab quality control

2001 ~ 2002   **Department of Physical Therapy, College of medicine, NTU, Taiwan**

Part-time Research Assistant

- Used SAS statistical software to analyze National health insurance research database

Bioinformatics and computer training

1. Introduction to JEMBOSS (Sep 2004, National Health Research Institutes)
2. Programming: Introduction to java (Summer 2005, NYMU)
3. Linux system management and Introduction to Apache/PHP/MySQL (Summer 2005, NYMU)
4. Principle of Bioinformatics I (Fall 2005, NYMU)
5. Statistical Basis for Bioinformatics (Fall 2005, NYMU)
6. Principle of Bioinformatics II: Intermediate Perl Programming (Spring 2006, NYMU)
7. Advanced Statistical Methods in Bioinformatics: Multivariate analysis and Introduction to Microarray analysis (Spring 2006, NYMU)

8. Algorithms and Data structure (Spring 2006, NYMU; Fall 2006, NTU)

Epidemiological training

1. Introduction to Epidemiology (Spring 2000, NTU)

2. Introduction to Disease Surveillance System (Summer 2000, Taiwan CDC)

3. Practice in Epidemiology (Spring 2001, NTU)

4. Epidemiology of Infectious Disease (Spring 2001, NTU)

5. Workshop on Virus Evolution and Molecular Epidemiology (Spring 2005, National Health Research Institutes)

Profession License

Medical Technologist, Taiwan

Poster Presentations

May.2007   107th ASM general meeting, Toronto, Canada

- Prokaryotic Non-Coding Small RNA Prediction: Oral Pathogen Genomes as Examples

  Y-F. Chang, **C-C. Lo**, C-H. Chang, G. Xie

- Oralgen Sequence Database at Los Alamos National Laboratory

  G. Xie, T. S. Brettin, G. L. Myers, N. N. Thayer, Y-F. Chang, **C-C. Lo**, M. Misra

Apr.2007   Wellcome Trust Microbial Genomes Conference, Hinxton, Cambridge, London, UK

- INCO: An Integrated Interaction Network of *Escherchia coli* K-12 MG1655

  Ying-Hsueh Huang, **Chien-Chi Lo**, Wen-Ching Chan, Wei-Xuan Lo, Chih-Hsien Yang, Chi Yang, Ching-Hung Tzeng, Tien-Chueh Kuo, Yi-Feng Chang and Chuan-Hsiung Chang

Nov.2004   Annual conference of Taiwan Society of Laboratory Medicine, Taipei, Taiwan

- Phylogenetic Analysis of *vpu* Genes of the HIV-1 in Taiwan

  Lo CC, Wu SH, Tsai LH, Chang SY, Kao CL, Chen MY, Lee CN

Intern

2006 summer   **Los Alamos National Laboratory, U.S. Department of Energy**

Project: Statistical comparison of tryptophan-codon content and sRNA prediction: novel method development   Advisor: Dr. Gary Xie

- Downloaded and installed intracellular pathogen genomes from publicly available resources
- Analyzed the relationship between Tryptophan content and GC content using probability model and statistical inference among closely related intracellular pathogens
- Developed a method to predict small RNAs and used it in the Porphyromonas gingivalis small RNAs detection
- Oral presentation for project result

Aug.2001~Jun.2002   **Department of Laboratory medicine, NTU Hospital**

- Training for being a medical technologist

2000 summer   **Center for Disease Control, Department of Health, Taiwan**

- Laboratory Training for enterovirus identification

Course Projects

Apr.2006~Jun.2006 **Functional annotation for *Ganoderma lucidum* genome, YMU**

- Based on blast algorithm to set up a tool for Auto-annotation pipeline (AutoFACT, 2005 Bioinformatics)
- Downloaded and build several publicly available database such as UniProt, KEGG, COG, Pfam and NCBI's non-redundant database
- Mapped annotation results to Gene Ontology database

Feb.2001~Jun.2001 **Characteristics of Familial Hepatocellular Carcinoma (HCC) among Chronic Hepatitis B Carriers in Taiwan, NTU**

- Used hospital-based data to proceed a Retrospective Cohort Study
- Evaluated Cumulative risk of HCC among first-degree relatives of patients with HBV-related HCC by Kaplan-Meier estimates and Log-Rank test
- The results indicate that there exist genetic effect on HCC family aggregation.

Language and Computer Skills

- English as a Second Language (ESL) classes (Fall 2007, University of New Mexico-Los Alamos)
- Fluent Mandarin, Taiwanese, upper-intermediate level English
- Intermediate in Windows PC environment (Word, Excel, PowerPoint) and Linux operation system (Ubuntu)
- Familiar with statistical analysis software (SPSS,SAS)
- Intermediate Perl, HTML language
- Familiar with image processing software (Photo Impact)

Community Service

1998~2000 summer Member of the Public Health Service and Working Team in Nantou and Miao-Li, Taiwan

Feb.2000 Member of the Service Team in Keelung mountain area, Taiwan

Leadership Experience

2002 ~ 2004 Chief of Medical Lab in Taitung Branch of the Hualien Armed Forces General Hospital

1998 ~ 2000 Chief of Resource Department in Student Council of College of Public Health, NTU